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10/617,612	07/11/2003	Carl Thomas Vuk	16304-US	2967

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EXAMINER	
CIRIC, LJILJANA V	
ART UNIT	**PAPER NUMBER**
3753	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/617,612	VUK, CARL THOMAS	
	Examiner	Art Unit	
	Ljiljana (Lil) V. Ciric	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *none* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07112003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on July 11, 2003 was filed before the mailing date of the instant first Office action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "11" and "13" have both been used to designate the cab {see paragraph [014] and paragraphs [016] and [017] of the specification}. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because does not avoid using phrases which can be implied (i.e., "is provided"). Note that the first sentence of the abstract does not necessarily have to be a complete sentence. Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities, for example: "(away from cab 13)" {line 7 of paragraph [016] and line 8 of paragraph [017]} should be replaced with "(away from

cab 11)" for improved consistency; "(such as 6)" {line 5 of paragraph [017]} should be written out in full for improved readability, i.e., as "(such as six)"; and, each of acronyms "CAN" {line 7 of paragraph [018]} and "EGR" {line 7 of paragraph [019]} should be accompanied with the corresponding terms written out in full for improved clarity of disclosure and for improved readability.

Appropriate correction is required.

Claim Objections

5. Claims 5, 6, 9, and 14 are objected to because of the following informalities: "blowing" [claim 5, line 2; claim 14, line 2] should be replaced with "blows" for improved grammatical correctness and readability; a period (.) should be inserted immediately following claim number 6; and, "motors" [claim 9, line 3] should be replaced with "motor" for improved grammatical correctness and readability. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 through 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example, there is insufficient antecedent basis in the claims for the following limitations in the claims: "the engine" [claim 1, line 5; claim 2, line 2; claim 3, line 2; claim 6, line 3; claim 7, line 4; claim 7, line 5; claim 7, line 7; claim 7, line 8; claim 8, line 2; claim 8, line 4; claim 8, lines 4-5; claim 11, line 4; claim 11, lines 4-5; claim 13, line 2]--note that while an engine is recited as part of an intended use limitation in each of base claims 1, 7, and 11, none of the base claims positively recite an engine to provide proper antecedent basis for the aforementioned limitation; "the hood" [claim 1, line 5; claim 6, line 3; claim 6, line 5; claim 7, line 5; claim 7, line 8; claim 7, lines 9-10; claim 11, line 5; claim 11, line

7]—note that while a hood is recited as part of an intended use limitation in each of base claims 1, 7, and 11, none of the base claims positively recite a hood to provide proper antecedent basis for the aforementioned limitation; "the cab" [claim 7, line 8]—note that while a cab is recited as part of an intended use limitation in the preamble of base claim 7, the claim fails to positively recite a cab to provide proper antecedent basis for the aforementioned limitation; "the generator" [claim 11, line 6]—note that while a generator is recited as part of an intended use limitation in claim 11, a generator is not positively recited in the claim so as to provide proper antecedent basis for the aforementioned limitation; and, "the fan unit" [claim 13, line 2].

As written, it is not clear to which preceding element(s) the term "thereof" [claim 1, line 7; claim 7, line 10; claim 11, line 8] refers to. Recommend replacing the term "thereof" with a direct recitation of the corresponding element referred to thereby.

With regard to each of claims 4 and 9 as written, it is not clear whether the electrical generator is or is not being positively recited by the claims, thus rendering indefinite the metes and bounds of protection sought by the claims.

With regard to claim 6 as written, it is not clear whether the limitation "an engine charge air cooler positioned *behind* the engine cooler radiator" appearing in line 2 of the claim is intended to mean that the engine charge air cooler is positioned upstream of the engine cooling radiator, downstream of the engine cooling radiator, or closer towards the back of the vehicle than the engine cooling radiator, thus rendering indefinite the metes and bounds of protection sought by the claims.

Claims 11 through 14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: an electric motor or plural electric motors operably connected to the "electric-motor driven" fans as recited in base claim 11.

Claims 1, 3 through 8, 9 through 11, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are, for example: (a) the one between the fan unit and the radiator as recited in each of base claims 1 and 7; the one between the charge air cooler fan unit and the charge air cooler as recited in base claim 7; the ones between the plurality of fans and the radiator as recited in base claim 11; and, the ones between the engine, the fan units/fans, the fan motor(s), and the electrical generator as recited in each of claims 4, 9, and 11.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. As best can be understood in view of the indefiniteness of the claims, claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Bland.

Bland discloses an electrical fan unit 26 disposed below engine cooling radiator 28 and above engine 17 in an off-road vehicle or riding lawn mower 10, the lawn mower 10 including an open cab comprising an operator seat 19 and roll bar 43 as well as a hood or cover 40 having an opening covered by screen 37. See Figures 1 through 4. The electrical fan unit 26 inherently has an associated electric fan motor which is powered by a generator/alternator connected to the engine 17.

The reference thus reads on the claims.

10. Alternately for claims 1, 2, and 5 and as best can be understood in view of the indefiniteness of the claims, claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al.

Clark et al. discloses a fan 50 disposed in a shroud 52 which extends between engine 42 and radiator 88 in an off-road vehicle or skid steer loader10, the skid steer loader 10 including a cab 16 as well as a hood 44 having an outlet 58. See Figure 5 especially.

The reference thus reads on the claims.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. As best can be understood in view of the indefiniteness of the claims, claims 3 and 11 through 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bland in view of Dicke.

As described in greater detail above, Bland discloses a cooling system for an off-road vehicle essentially as claimed, including an electrical fan unit 26 disposed below engine cooling radiator 28 and above engine 17. While Bland does not disclose the fan unit 26 as including a plurality of fans, not only is

duplication of parts generally not inventive, but it is also known in the art of designing cooling systems for off-road vehicles and taught by Dicke, for example, to have a fan unit comprising two or more fans associated with the radiator and other coolers in an off-road vehicle's cooling system in order to reduce fan noise and permit greater fine-tuning of airflow rates through the coolers.

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the cooling system of Bland by modifying the fan unit 26 thereof so as to have two or more fans as part of the fan unit as taught by Dicke in order to reduce fan noise and permit greater fine-tuning of airflow rates through the coolers.

Allowable Subject Matter

13. Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Note that if any limitations are removed and/or broadened in overcoming the rejections under 35 U.S.C. rejections or in amending claim 6 and the intervening claims, this indication of allowable subject matter will no longer be applicable.

14. Claims 7 through 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Note that if any limitations are removed and/or broadened in overcoming the rejections under 35 U.S.C. rejections or in amending base claim 7, this indication of allowable subject matter will no longer be applicable.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

At least Raney, DaFoe, Fujikawa et al., Busboon et al., and O'Neill et al. each discloses a vehicular cooling assembly including a fan disposed below a radiator and above an engine where the fan blows air upwardly through the radiator.

Hutchison et al., Tamba et al., Fujikawa et al., Murakawa et al., Kurohara et al., Imanishi et al., and Yamashita et al. each dislcoses a fan unit disposed between a radiator and a vertical liquid cooled engine where the fan draws air downward through the radiator.

West and Sheidler et al. disclose particulars relating to the state of the art in vehicular engine cooling systems.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner can normally be reached on Mondays through Fridays from 10:00 a.m. to 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene, can be reached at 571-272-4930.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 3753